

Oscilloscope II

Name: _____ Section: 4BL-____ Date performed: ____/____/____

Lab station: _____ Partners: _____

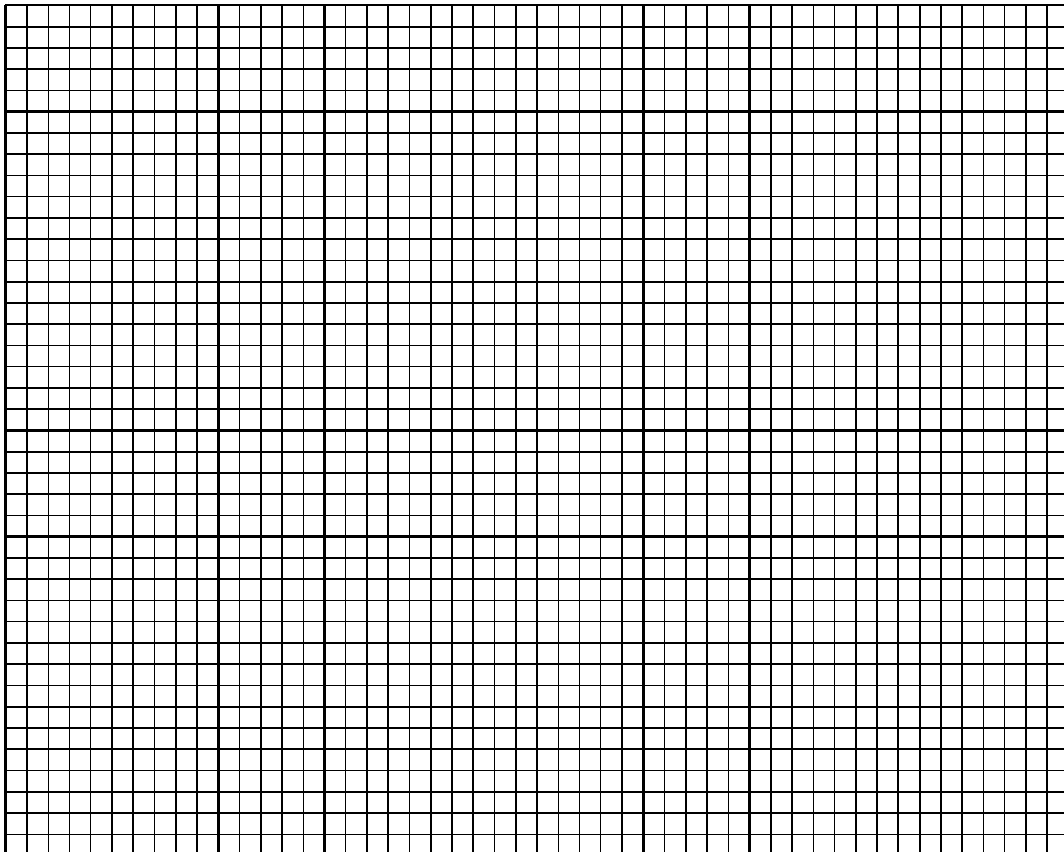
Circuit box #____ Oscilloscope #____

Resistance characteristic curve of light bulb

Circuit diagram:

Oscilloscope: X (Ch____): _____ V/div mode: DC / AC

Y (Ch____): _____ V/div mode: DC / AC



Why is the retrace in (Q-6) nearly a straight line?

Calculate the resistance of the light bulb at 5 V.

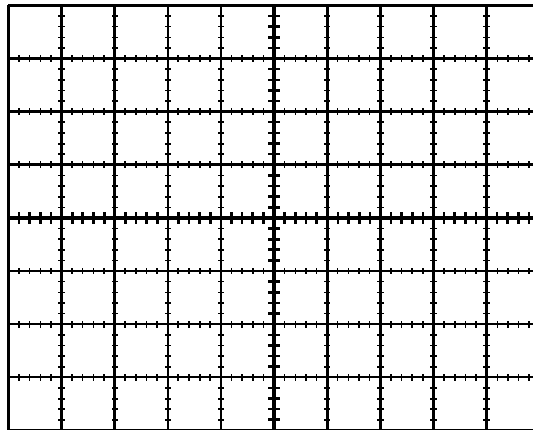
Applying a time-varying voltage to the lightbulb circuit

Circuit diagram:

(Q-10) Sketch the trace at $f = 0.1$ Hz:

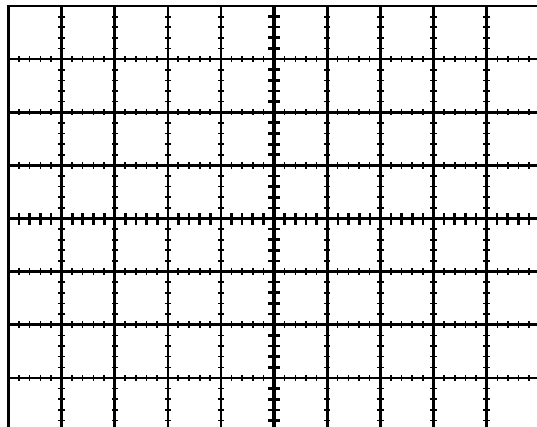
Oscilloscope: X (Ch___): _____ V/div mode: DC / AC

Y (Ch___): _____ V/div mode: DC / AC



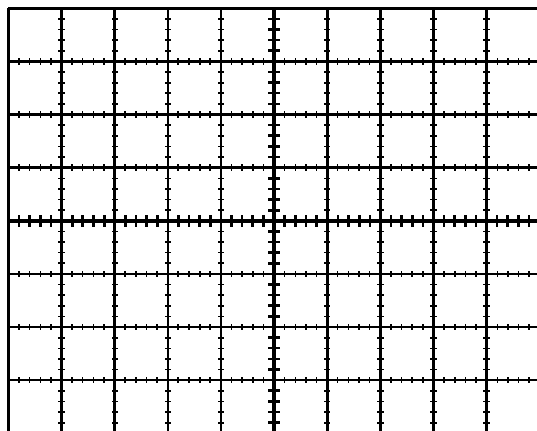
Explain the shape of this curve:

(Q-11) Sketch the trace at $f = 20$ Hz:



Why is this different from (Q-10)?

(Q-12) Increase amplitude suddenly from zero to maximum. Sketch what happens:



Explain what happens and why: